

tion techniques supplied by the peripheral **500** and client-server negotiation techniques with the mobile unit in order to supply contracted peripheral services to mobile users (**615**). This allows a user to carry a very small computer such as a mobile phone or wristwatch computer and to then use it as a full-blown system with a non-area constrained user interface.

[**0064**] Another example is in an airplane. When a passenger lets the tray table down the peripheral **500** becomes exposed. The passenger can pull the surface **515** down like a window blind or have it lowered automatically under motor control. In some embodiments the peripheral **515** remains in an extended state behind the tray table at all times. In some embodiments, the tray table itself also has another peripheral **500** mounted within, for example on the left edge. The user then causes the surface **515** to be extended across the tray table. Now the user can use the surface behind where the tray table goes for a viewing surface for video viewing or computer applications. The surface **515** lying across the tray table can be used as a keyboard. The method **600** may be used to allow the user to gain access to the services offered by these peripherals. A server in the airplane can take part in the step **635** to ensure the proper passenger is using the associated peripheral and to assess a charge to the passenger for its use. In one type of embodiment, the user reads a code from the peripheral **515** and plugs it into his hand-held device. Once the code is entered, it is used in the service discovery sequence **615** in order to ensure the appropriate mobile is coupled to the appropriate peripheral for cases where there are plural passengers and plural sets of peripherals **500** in the same area.

[**0065**] Although the present invention has been described with reference to specific embodiments, other embodiments may occur to those skilled in the art without deviating from the intended scope. In the methods **200** or **600**, the order of the steps, substeps or actions may be altered wherever such a change does not render the method inoperable. While Bluetooth™ has been used as a wireless local (personal) area networking technology (short range wireless coupling) by way of example, other wireless technologies such as HomeRF™, IEEE 802.11, point-to-point radio, optical or infrared links, or other short-range wireless protocols can be equivalently used. In certain environments such as auto and airplane systems, the peripheral **500** may be coupled to a fixed vehicle-borne mobile unit (vehicle-mounted computer system). In such cases, certain steps of the methods may be omitted and the coupling between the vehicle mounted computer and the peripheral **500** may make use of wired connections. Also, a “hand-held” device generically implies a size, and such devices may also be wrist-worn, for example. Therefore, it is to be understood that the invention herein encompasses all such embodiments that do not depart from the spirit and scope of the invention as defined in the appended claims.

What is claimed is

1. A flexible-retractable peripheral system comprising:

- a flexible-retractable peripheral surface selected from the group consisting of a display and a keyboard;
- a coupling that couples signals to and/or from the peripheral to a hand-held mobile computing device.

2. The system of claim 1, further comprising:

- a linked support member with movable links that can be tightened to make the flexible-retractable peripheral surface rigid in at least a linear dimension.

3. The system of claim 1, further comprising:

- a stand-alone peripheral enclosure that houses the flexible-retractable peripheral system; and

wherein the coupling further comprises a short range wireless transceiver.

4. The system of claim 3, wherein the transceiver operates according to a personal area networking protocol.

5. The system of claim 4, further comprising:

- a video decoder circuit;

wherein the flexible-retractable peripheral surface comprises a display surface for video program viewing.

6. The system of claim 3, further comprising an optical isolator that optically couples the flexible-retractable peripheral to the stand-alone peripheral enclosure.

7. The system of claim 3, further comprising:

- a vehicle;

wherein the stand-alone peripheral enclosure is mounted into a portion of the vehicle and is able to provide the flexible-retractable peripheral for use by a vehicle passenger.

8. A hand-held mobile unit comprising:

- a processor;

- a memory;

an area-constrained user interface that provides user input and/or output to the hand-held mobile unit;

a flexible-retractable peripheral selected from the group consisting of a display and a keyboard;

a coupling that selectively couples signals between the flexible-retractable peripheral and the processor; and

a non-area constrained user interface;

wherein the hand-held mobile unit selectively provides the area-constrained user interface and/or the non-area constrained user interface depending on an operating mode of the hand-held mobile unit.

9. The hand-held mobile unit of claim 8 wherein the hand-held mobile unit comprises both the flexible-retractable display and the flexible-retractable keyboard.

10. The hand-held mobile unit of claim 8 wherein the area-constrained user interface includes an input device that is used as a mouse-pointing device for the non-area constrained user interface.

11. The hand-held mobile unit of claim 8 wherein the flexible-retractable peripheral is attached to the hand-held unit by a hinged support structure.

12. The hand-held mobile unit of claim 8 wherein the flexible-retractable peripheral **1** is attached to the hand-held unit by a retractable and downward protruding support structure.

13. The hand-held mobile unit of claim 8, further comprising:

- a linked support member with movable links that can be tightened to make the flexible-retractable peripheral rigid in at least a linear dimension.